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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|---|-------------|------------------------|----------------------|------------------|
| 10/628,921  | 07/29/2003  | John J. Breen          | 16356.817 (DC-05156) | 8117             |
| 27683 7590 03/13/2008<br>HAYNES AND BOONE, LLP<br>901 Main Street<br>Suite 3100<br>Dallas, TX 75202 |             |                        |                      |                  |
| EXAMINER<br>BOATENG, ALEXIS ASIEDUA   |             |                        |                      |                  |
| ART UNIT<br>2838  |             | PAPER NUMBER           |                      |                  |
| MAIL DATE<br>03/13/2008   |             | DELIVERY MODE<br>PAPER |                      |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/628,921

**Applicant(s)**

BREEN ET AL.

**Examiner**

ALEXIS BOATENG

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/11/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6, 8-10, 12, 14, 15, 19 - 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6, 8-10, 12, 14, 15, 19 - 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 4 - 6, and 8 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reipur (U.S. 5,864,220).

**Regarding claim 1**, Reipur discloses wherein a method for converting an alternating current (AC) input to a direct current (DC) output, the DC output providing power to a load, the method comprising:

receiving the alternative current (AC) input (figure 5 item 1);

receiving a first feedback signal indicative of a target voltage required by the load, wherein the first feedback signal is an external feedback (column 12 lines 49 - 61);

receiving a second feedback signal indicative of the DC output, wherein the second feedback signal is an internal feedback (column 14 lines 51 – column 15 lines 5);

providing a controller module included in an AC-DC adapter and operable to receive the first feedback signal and the second feedback signal (column 14 lines 42 – 50);

providing a converter in the AC-DC adapter (figure 5 item 9);

the controller module adjusting a control signal, responsive to receiving the first and second feedback signals, to the converter to maintain the DC output within a predefined range of the target voltage (column 17 lines 43 – 65); and

during a charging phase, a difference between the DC output and the target voltage is always positive while providing a charge to the load, and the DC output is reduced to a predefined value upon completion of providing the charge to the load (column 16 lines 64).

**Regarding claims 3 and 4**, Reipur discloses wherein the second DC output provides power to the load, wherein the load is a battery (figure 5 "to battery").

**Regarding claim 5**, Reipur discloses wherein upon a loss of the first feedback signal the DC output is maintained at the predefined voltage (column 12 lines 49 - 61).

**Regarding claim 6**, Reipur discloses wherein the predefined voltage is equal to a previous voltage value of the DC output measured instantly prior to the loss to the first feedback signal (column 9 lines 56 – column 10 lines 10).

**Regarding claims 8 and 9**, Reipur discloses wherein the first feedback signal is received from the load ((column 12 lines 49 - 61: information is read from the battery).

**Regarding claim 10**, Reipur discloses wherein the first feedback signal is received as a single digital signal, a pulse width modulation signal, an analog signal, a digital signal superimposed on another analog signal, or an SMBus signal (column 15 lines 55 – 64).

3. Claims 12, 14, 15, and 19 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reipur (U.S. 5,864,220) in view of Unno (U.S. 7,183,748) or (WO01/59905 for date purposes).

**Regarding claim 12**, Reipur discloses an integrated alternating current (AC) to direct current (DC) adapter comprising:

a rectifier module operable to receive an AC input and generate a first DC output (figure 5 item 2);

an AC-DC adapter (figure 5 item 9);

a controller module included in the AC-DC adapter and operable to receive a first feedback signal input indicative of a target voltage required by a load, wherein the first feedback signal is an external feedback, and a second feedback signal input indicative of the second DC output, wherein the second feedback signal is an internal feedback, the controller module adjusting the control signal, responsive to the first and second feedback signal inputs, to the buck converter module to maintain the second DC output to be within a predefined range of the target voltage (column 12 lines 49 - 61 and column 14 lines 42 - 50); and

during a charging phase, a difference between the second DC output and the target voltage is always positive while providing a charge to the load, and the second DC output is reduced to a predefined value upon completion of providing the charge to the load (column 16 lines 64). Reipur discloses the invention as claimed, but does not disclose the remainder. Unno discloses in figure 1 wherein

item 18 is a dc-dc converter. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Reipur system with the Unno system so that excessive voltage does not damage the system.

**Regarding claims 14 and 15,** Reipur discloses wherein the second DC output provides power to the load, wherein the load is a battery (figure 5 "to battery").

**Regarding claims 19 and 20,** Reipur discloses wherein the first feedback signal is received from the load ((column 12 lines 49 - 61: information is read from the battery).

**Regarding claim 21,** Reipur discloses wherein the first feedback signal is received as a single digital signal, a pulse width modulation signal, an analog signal, a digital signal superimposed on another analog signal, or an SMBus signal (column 15 lines 55 – 64).

**Regarding claim 22,** Reipur discloses an integrated alternating current (AC) to direct current (DC) adapter comprising:

- a processor (figure 5 item 7);

- a system bus (figure 5);

- a memory coupled to the processor through the system bus (column 17 lines 49 - 54);

- a power supply system operable to provide power to the processor, the bus and the memory, the power supply system being connectable to an alternating current power supply system wherein the power supply system includes (figure 6 item 50):

a rectifier module operable to receive an AC input and generate a first DC output (figure 5 item 2);

an AC-DC adapter (figure 5 item 9);

a controller module included in the AC-DC adapter and operable to receive a first feedback signal input indicative of a target voltage required by a load, wherein the first feedback signal is an external feedback, and a second feedback signal input indicative of the second DC output, wherein the second feedback signal is an internal feedback, the controller module adjusting the control signal, responsive to the first and second feedback signal inputs, to the buck converter module to maintain the second DC output to be within a predefined range of the target voltage (column 12 lines 49 - 61 and column 14 lines 42 - 50); and

during a charging phase, a difference between the second DC output and the target voltage is always positive while providing a charge to the load, and the second DC output is reduced to a predefined value upon completion of providing the charge to the load (column 16 lines 64). Reipur discloses the invention as claimed, but does not disclose the remainder. Unno discloses in figure 1 wherein item 18 is a dc-dc converter. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Reipur system with the Unno system so that excessive voltage does not damage the system.

***Response to Arguments***

4. Applicant's arguments, see page 2/05/08, filed 2/05/08 with respect to the rejection(s) of claim(s) 1 under Reipur have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of 103 (a) Reipur (U.S. 5,864,220). The applicant argues that the previous Final action, necessitated by amendment, was improper. The applicant amended the claims to read, inter alia, "wherein the first feedback is an external feedback....wherein the second feedback is an internal feedback." This constitutes as new issue because it matter did not come from dependent claims, it came from the specification; therefore the Final Action is proper.

**Regarding claim 1**, the applicant argues that the Reipur reference does not disclose a feedback signal. It is obvious that the charging signals disclosed in figures 2 and 3 provide feedback signals.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not



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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXIS BOATENG whose telephone number is (571)272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ullah Akm can be reached on (571) 272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bao Q. Vu/  
Primary Examiner, Art Unit 2838  
March 3, 2008